

Art Unit: 1653

Examiner's Amendments to the Claims:

Claims 30, 36, 40 and 41 have been amended as follows:

30. (Currently amended) A pure peptide having bifidogenic properties, and wherein the peptide is [-] an amino acid sequence selected from the group consisting of:

- a) [R₁-]EVAARARVVW[-R₂] (SEQ ID NO: 8),
- b) [R₁-]ARRARVVWAAVG[-R₂] (SEQ ID NO: 22),
- c) [R₁-]ARRARVVWCAVG[-R₂] (SEQ ID NO: 14), and

|
[R₃-]CIAL[-R₄] (SEQ ID NO: 15)
- d) [R₁-]ARRARVVWCAVGE[-R₂] (SEQ ID NO: 16)[,]

|
[R₃-]CIAL[-R₄] (SEQ ID NO: 15).

[wherein

R₁, R₂ independently represent H or a peptide containing up to 100 amino acids; and R₃, R₄ independently represent OH, NH₂ or a peptide containing up to 100 amino acids;

-the amino acid sequence N-modified by amidation, acetylation, sulfation, phosphorylation, glycosylation, or oxidation; or

-a fusion protein, thereof, obtained by chemical bonding.]

36. (Currently amended) A pure peptide having bifidogenic properties and selected from the group consisting of SEQ ID NO:14 and SEQ ID NO:16.

40. (Currently amended) A pure peptide having bifidogenic properties, and wherein the peptide is

[a)] an amino acid sequence selected from the group consisting of:

- [R₁-]EVAARARVVW[-R₂] (SEQ ID NO: 8),
- [R₁-]ARRARVVWCAVG[-R₂] (SEQ ID NO: 14),

|
[R₃-]CIAL[-R₄] (SEQ ID NO: 15)
- [R₁-]ARRARVVWCAVGE[-R₂] (SEQ ID NO: 16),

|
[R₃-]CIAL[-R₄] (SEQ ID NO: 15)

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[R₁]GRRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQ
A[-R₂]

(SEQ ID NO: 19),

[R₁-]ARRARVVWAAVG[-R₂] (SEQ ID NO: 22), and

[wherein

R₁, R₂ independently represent NH₂, an amino acid, or a peptide
containing up to 100 amino acids; and

R₃, R₄ independently represent COOH, CONH₂, an amino acid, or a
peptide containing up to 100 amino acids, or]

[R₁]YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRR
PNLHPSF[-R₂] (SEQ ID NO: 17)[,].

[wherein

R₁, R₂ independently represent H, or a peptide containing up to 100 amino
acids excluding amino acid sequence 1-62 of human κ-casein, and

R₃, R₄ independently represent OH, NH₂, or a peptide containing up to
100 amino acids excluding amino acid sequence 1-62 of human κ-casein;

or

b) the amino acid sequence N-modified by amidation, acetylation, sulfation,
phosphorylation, glycosylation, or oxidation.]

41. (Currently amended) A pure peptide having bifidogenic properties, and wherein
the peptide is [-] an amino acid sequence selected from the group consisting of:

- a) EVAARARVVW (SEQ ID NO: 8),
- b) ARRARVVWCAVG (SEQ ID NO: 14),
- c) ARRARVVWAAVG (SEQ ID NO: 22), [or] and
- d) [R₁-]ARRARVVWCAVG[-R₂] (SEQ ID NO: 14)[,]
[R₃-]CIAL[-R₄] (SEQ ID NO: 15).

[wherein

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R_1 , R_2 independently represent H or a peptide containing up to 100 amino acids; and

R_3 , R_4 independently represent OH, NH_2 or a peptide containing up to 100 amino acids; or

-the amino acid sequence N-modified by amidation, acetylation, sulfation, phosphorylation, glycosylation, or oxidation.]